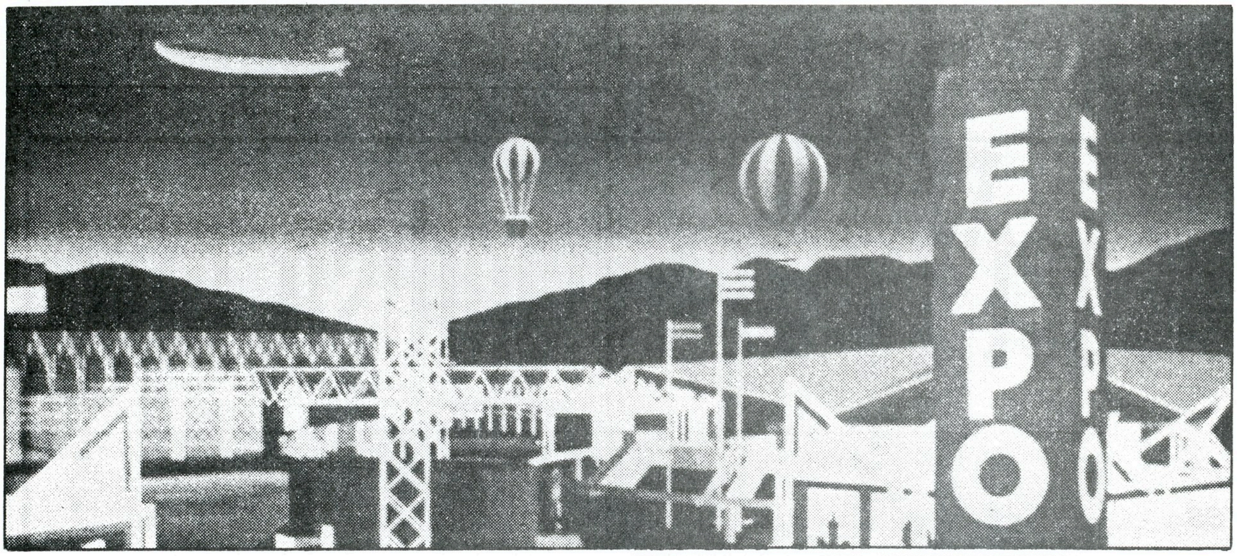


Graphics firm can simulate real life

By George Brett Toronto Star

Most chief executives shudder to see their capital equipment declining in value. But John Pennie, president of Omnibus Computer Graphics Inc., can hardly wait for the day when a $100 microchip will be able to do the work of his company's $12 million Cray X-MP supercomputer.

When that day comes — perhaps as soon as five years, Pennie forecasts — Omnibus will hook up hundreds of these "Crays-on-a-chip" to work together.

That awesome computing power will create graphics so real you won't be able to tell a computer-generated Meryl Streep or Jack Nicholson from the real star.

What's the point? To save money, keep actors and stuntmen out of dangerous situations and simulate situations impossible to do in real life — such as crashing a Boeing 747 in the Grand Canyon and then doing it again if the director isn't satisfied.

And no, there's no reason computers couldn't *create* a movie idol with the potential following of a Robert Redford.

Toronto-based Omnibus became the world's biggest producer of computer-generated graphics for the entertainment industry with the recent takeover of Digital Productions Inc. of Los Angeles (including its Cray).

You've probably seen Omnibus' current three-dimensional color graphics on TV — including a commercial for Kodak and the one that "flies" the viewer over and through Expo '86 in Vancouver.

Omnibus designed the action logos for CBC and Global television, and it created the graphics sequence that introduces Hockey Night in Canada.

Impressive, but not lifelike in appearance, right?

Graphics simulations require 20 minutes of computer time per frame and a second of viewing requires 30 frames. For a 30-second commercial, that comes to 300 hours on an expensive mainframe computer like Omnibus' VAX 780s.

Real-life simulations, Pennie says, require as much as three *days* per frame, which is why they "are possible but not yet affordable."

Until the cost of computing power tumbles, accompanied by developments in software that will do things faster, Omnibus will continue to give movies and TV its splashy graphics.

Apart from Digital's Cray and other equipment, Joseph Martin, president of Omnibus' northern division, says the company has about $25 million of equipment in Toronto, New York and Los Angeles.

Connected by satellite, the VAX 780s in the three cities can work together as if they're in the same room.

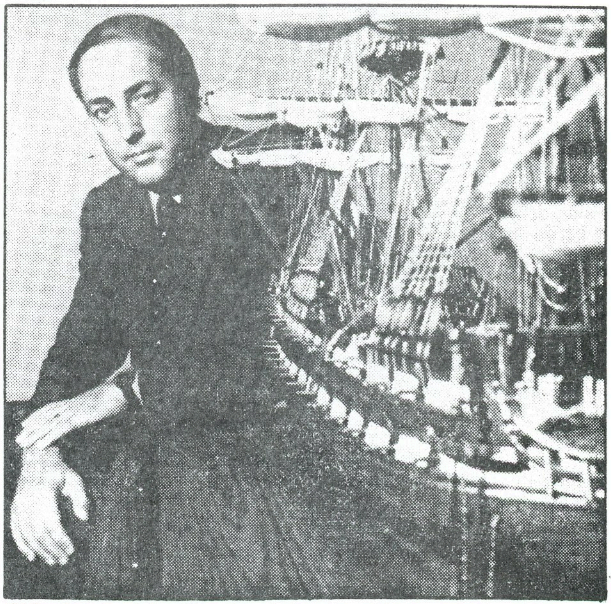
Martin suggests Omnibus and Digital, which have about 150 employees and will continue to operate separately, are a neat fit. With the help of its Cray, Digital "can produce higher-resolution graphics." It did the computer simulation for *The Last Starfighter* and *2010*.

Omnibus is concentrating particularly on animation, says Pennie. "We're ahead in animation."

He points to the two-dimensional cartoons your kids watch on Saturday mornings, consisting of individual frames drawn by hand by as many as 2,000 artists working in warehouses in Taiwan and Korea.

Within two years, he says, Omnibus' superior three-dimensional animation will be cheap enough to undercut this Far Eastern competition.

In addition, the company expects about $2 million in revenues from its graphics work in *Flight of the Navigator*. It has signed a graphics licensing contract worth another $2 million with Control Data Corp. and has licensed its technology to the Japanese co-producer of the Shogun mini-series.



Shipshape: John Pennie, of Omnibus Computer Graphics, sits beside his model galleon. His firm creates computer graphics like Expo '86 clip, above, and expects '87 sales of $30 million.

The market for computer-generated graphics used in entertainment as a whole, estimated to reach $180 million this year, has been growing at 45 per cent a year from $12 million six years ago, Pennie says.

He predicts it will be worth $5 billion in 10 years and he's working hard to see that Omnibus will have a healthy slice of it. He expects sales next year of $30 million, jumping to $150 million in five years.

As you'd expect, Omnibus' Toronto headquarters, on the ground floor of a Yonge St. tower, combines its electronic paraphernia with ultra-modern decor.

But when Pennie feels the ambience is a trifle too space-age, he occasionally rests his eyes on a painstakingly detailed model of a Spanish galleon, circa 1650, in a glass case in his office. He built it over two years as an anodyne to all the electronic gear.

Pennie stresses that despite Omnibus' state-of-the-art business, it *is* a business — not something thrown together by a few engineers long on ideas.

His background is in marketing and business management. "This is a money-making business," he says. "The key is to manage resources to make money for your shareholders."

Omnibus, founded by Pennie and chairman Kelly Jarmain in 1980, first sold shares to the public in December, 1983. Its shares last closed on the Toronto Stock Exchange at $7.13 compared with a 52-week high of $7.50 and a low of $1.89.

For the three months ended March 31, the company reported net profit equal to 4 cents a share compared with a loss a year earlier of 11.5 cents. In the current fiscal year ending Sept. 30, Pennie estimates profit at 30 to 35 cents a share.

Murray Grossner, high-tech analyst with investment dealer Richardson Greenshields of Canada Ltd., agrees with Pennie's estimate of $30 million sales for the company for fiscal 1987 and forecasts earnings of "close to" 50 cents a share for that year.

He feels the shares "could double from current levels" and rates the stock "a top buy for more aggressive accounts."